

CLAIMS

1. A valve which can be implanted in the body of the patient for the treatment of hydrocephalus, of the type comprising:

a housing forming a cavity;

a separation membrane mounted at its periphery on the housing, provided with an orifice and delimiting in said cavity an upstream chamber and a downstream chamber;

said housing forming in the upstream chamber a seat for the membrane, said seat surrounding said orifice;

a rod with a variable cross-section arranged so as to enter said orifice axially;

means of supporting the rod;

means of axial movement of the means supporting the rod; and

drive means for driving said movement means;

said drive means being arranged so as to be activated from the outside of the body of the patient so as to allow the adjustment of the valve in a non-invasive manner.

2. A valve according to Claim 1, in which said rod support means comprise elastic means.

3. A valve according to Claim 2, in which said support means comprise a plurality of radial elastic support arms fixed at a first one of their ends to said housing and supporting a rod support sleeve at their other end.

4. A valve according to Claim 3, in which said first ends of the support arms are fixed to a fixing ring adjacent to the edge of said membrane.

5. A valve according to Claim 1, in which said movement means comprise a lever mounted on said housing at a first one of its ends.

6. A valve according to Claim 1, in which said movement means comprise a lever mounted on said housing and in abutment on said rod support means, said lever cooperating with cam means of said drive means.

7. A valve according to Claim 6, in which said lever comprises an elastic blade fixed to said housing.

8. A valve according to Claim 6, in which said lever is mounted on the housing at one of its ends, cooperates with said cam means at its other end, and is in abutment on said rod support means in its middle part.

9. A valve according to Claim 6, in which the longitudinal position of the cam means in the general direction of the lever is adjustable.

10. A valve according to Claim 6, comprising elastic means for applying said lever to said cam means.

11. A valve according to Claim 10, in which said elastic means comprise at least one elastic blade.

12. A valve according to Claim 11, in which said elastic blade is produced in a single piece with a fixing ring.

13. A valve according to Claim 12, in which the housing and the fixing ring comprise projections and complementary recesses for the angular location of the ring with respect to the housing.

14. A valve according to Claim 1, in which said drive means comprise a magnetic motor.

15. A valve according to Claim 1, in which said drive means comprise at least one motorised cam arranged so as to cooperate with a cam follower of said movement means.

16. A valve according to Claim 15, in which said motorised cam comprises a plate arranged so as to be driven in rotation by a motor, said plate comprising at least two radial ribs of different heights arranged so as to cooperate with said cam follower.

17. A valve according to Claim 16, in which said plate comprises two pairs of substantially perpendicular radial ribs, the two ribs in each pair being aligned on each side of the rotation axis of the plate and being substantially of the same height, different from the height of the ribs in the other pair, and in which said lever forms, in its part where it cooperates with said cam, two branches each cooperating with one of the ribs in one of said pairs of ribs.

18. A valve according to Claim 16, comprising two elastic blades each in abutment on one of branches of a lever of said movement means.

19. A hydrocephalus treatment valve comprising:

- a housing including a cavity;
- a separation membrane mounted at its periphery on the housing, provided with an orifice and delimiting an upstream chamber and a downstream chamber in the cavity;
- a membrane seat in the housing surrounding the orifice;
- a rod with a variable cross-section arranged so as to axially enter the orifice;
- a rod support being axially movable; and
- a driver operably causing the axial movement;

the driver being arranged so as to be activated from outside of a patient and to allow adjustment of the valve in a non-invasive manner.